

AMENDMENTS TO THE CLAIMS:

1. (Canceled)

2. (Currently Amended) The heat exchanger of ~~claim 1~~ claim 5, wherein
2 a fluid flow path is defined between the reinforcing body and the aligned openings defining
said one passage.

3. (Currently Amended) The heat exchanger of ~~claim 1~~ claim 5, wherein
2 said reinforcing body is a substantially cylindrical rod and said one passage is substantially
round whereby fluid passes through an annular portion of said one passage around said
4 reinforcing body.

4. (Canceled)

5. (Currently Amended) ~~A~~ The heat exchanger of ~~claim 4~~, further for
2 exchanging heat between a first fluid and a second fluid, comprising:
a plurality of stacked plates, including a cover plate on one side of the stacked
4 plates and a base plate on the other side of the stacked plates, wherein
said plates have flat portions spaced from one another to define channels
6 therebetween.

each of said plates except said base plate include first, second, third and
8 fourth openings therethrough, said openings being aligned to define
first, second, third and fourth passages through said stacked plates,
10 said first and third passages being input and output passages, re-
spectively, for said first fluid and said second and fourth passages
12 being input and output passages, respectively, for said second fluid,
and
14 said first fluid input and output passages communicate with a first group of
said defined channels and said second fluid input and output pas-
16 sages communicating with a second group of said defined channels,
said channels of said first group being alternately disposed between
18 said channels of said second group;
a reinforcing body disposed in one of said first, second, third and fourth passages,
20 said reinforcing body being secured to said cover plate and said base plate
and spaced from the sides of the openings defining said one of said first,
22 second, third and fourth passages in said stacked plates between said cover
and base plates, wherein
24 the opening of said cover plate defining said one passage has a collar
therearound defining a diameter smaller than the diameter of the
26 openings of the other plates defining said one passage,
said reinforcing body has a neck secured in said collar, and

28 fluid openings extend through said collar communicating with said one pas-
 sage; and

30 a connector secured to said cover plate and adapted to connect with a fluid line
 whereby fluid may flow between said fluid line and said one passage
32 through said fluid openings.

 6. (Currently Amended) The heat exchanger of ~~claim 4~~ claim 5, wherein
2 said reinforcing ~~member~~ body neck is soldered in said collar.

 7. (Currently Amended) The heat exchanger of ~~claim 4~~ claim 5, wherein
2 said collar is an integrally formed deformation of said cover plate.

 8. (Currently Amended) The heat exchanger of ~~claim 4~~ claim 5, wherein
2 said collar is a ring fixed to said cover plate.

 9. (Currently Amended) The heat exchanger of ~~claim 4~~ claim 5, wherein:
2 a fluid flow path is defined between the reinforcing body and the aligned openings
 defining said one passage; and
4 said fluid flow path having a cross-sectional area substantially the same as the total
 cross-sectional area of said collar fluid openings.

10. (Currently Amended) The heat exchanger of ~~claim 4~~ claim 5, wherein
2 said base plate includes a flange, and said reinforcing member body is soldered to said
base plate flange.

11. (Original) The heat exchanger of claim 10, wherein said flange is an
2 integrally formed deformation of said base plate.

12. (Currently Amended) The heat exchanger of ~~claim 4~~ claim 5, wherein
2 said first and second fluids are different.

13. (Original) The heat exchanger of claim 12, wherein said first fluid is
2 CO₂ for vehicle air conditioner refrigerant and said second fluid is engine coolant.

14. (Currently Amended) The heat exchanger of ~~claim 4~~ claim 5, wherein
2 said plates have a generally flat heat exchange surface generally surrounded by a beveled
edge, and said plates are stacked by nesting said plates with said beveled edges together
4 and said flat heat exchange surfaces spaced.

15. (Original) The heat exchanger of claim 14, wherein said beveled
2 edges of nested plates are soldered together.

16. (Currently Amended) The heat exchanger of ~~claim 4~~ claim 5, further
2 comprising:

first spacing rings around said first and third passages blocking communication of
4 said first fluid input and output passages with said second group of defined
channels; and

6 second spacing rings around said second and fourth passages blocking communi-
cation of said second fluid input and output passages with said first group of
8 defined channels.

17. (Original) The heat exchanger of claim 16, wherein said first spacing
2 rings are secured in the space between said plates defining said second group of defined
channels.

18. (Currently Amended) A The heat exchanger of claim 1, for exchanging
2 ing heat between a first fluid and a second fluid, comprising:

a plurality of stacked plates, including a cover plate on one side of the stacked
4 plates and a base plate on the other side of the stacked plates, wherein
said plates have flat portions spaced from one another to define channels
6 therebetween.

each of said plates except said base plate include first, second, third and
8 fourth openings therethrough, said openings being aligned to define
first, second, third and fourth passages through said stacked plates.

10 said first and third passages being input and output passages, re-
 spectively, for said first fluid and said second and fourth passages
12 being input and output passages, respectively, for said second fluid,
 and
14 said first fluid input and output passages communicate with a first group of
 said defined channels and said second fluid input and output pas-
16 sages communicating with a second group of said defined channels,
 said channels of said first group being alternately disposed between
18 said channels of said second group; and
 a reinforcing body disposed in one of said first, second, third and fourth passages,
20 said reinforcing body being secured to said cover plate and said base plate
 and spaced from the sides of the openings defining said one of said first,
22 second, third and fourth passages in said stacked plates between said cover
 and base plates;
24 wherein alternating plates between said cover plate and said base plate have a
 thickness generally corresponding to the thickness of the cover and base
26 plates, and said plates between said alternating plates have a thickness less
 than said cover and base plate thickness.

19. (Currently Amended) A heat exchanger for exchanging heat between
2 a first fluid and a second fluid, comprising:

a plurality of stacked plates, including a cover plate on one side of the stacked
4 plates and a base plate on the other side of the stacked plates, wherein
said plates ~~are~~ have flat portions spaced from one another to define chan-
6 nels therebetween,

each of said plates except said base plate include first, second, third and
8 fourth openings therethrough, said openings being aligned to define
first, second, third and fourth passages through said stacked plates,
10 said first and third passages being input and output passages, re-
spectively, for said first fluid and said second and fourth passages
12 being input and output passages, respectively, for said second fluid,
and

14 said first fluid input and output passages communicate with a first group of
said defined channels and said second fluid input and output pas-
16 sages communicating with a second group of said defined channels,
said channels of said first group being alternately disposed between
18 said channels of said second group;

a first reinforcing body disposed in said first passage, said first reinforcing body
20 being secured to said cover plate and said base plate and spaced from the
sides of the openings defining said first passage in said stacked plates
22 between said cover and base plates; and

a second reinforcing body disposed in said third passage, said second reinforcing
24 body being secured to said cover plate and said base plate and spaced from
the sides of the openings defining said third passage in said stacked plates
26 between said cover and base plate;

wherein alternating plates between said cover plate and said base plate have a
28 thickness generally corresponding to the thickness of the cover and base
plates, and said plates between said alternating plates have a thickness less
30 than said cover and base plate thickness.

20. (Original) The heat exchanger of claim 19, wherein said plates are
2 generally rectangular, and said first and third passages are disposed adjacent opposite
corners of said plates.

21. (Original) The heat exchanger of claim 19, wherein said first fluid is
2 CO₂ for vehicle air conditioner refrigerant and said second fluid is engine coolant.

22. (Original) The heat exchanger of claim 19, further comprising:
2 a third reinforcing body disposed in said second passage, said third reinforcing
body being secured to said cover plate and said base plate and spaced from
4 the sides of the openings defining said second passage in said stacked
plates between said cover and base plates; and

6 a fourth reinforcing body disposed in said fourth passage, said fourth reinforcing
body being secured to said cover plate and said base plate and spaced from
8 the sides of the openings defining said fourth passage in said stacked plates
between said cover and base plates.